What is claimed is:

1. A graphics system comprising:

a graphics processor configured to generate a plurality of samples with a variable density, wherein the graphics processor generates at least a portion of the plurality of samples in a super-sampled manner;

a sample buffer coupled to said graphics processor for storing the plurality of samples having the variable density, wherein the plurality of samples comprised in the sample buffer correspond to an entire frame of a display; and

a sample-to-pixel calculation unit coupled to said sample buffer, wherein said sample-to-pixel calculation unit is configured to select and filter said stored samples to form output pixels, wherein the output pixels correspond to the entire frame of the display.

2. The graphics system as recited in claim 1, wherein said graphics processor is configured to vary the density of the samples generated on a basis selected from the group consisting of: a per-scan line basis, a per-group-of-scan-line basis, a per-region basis, a per-pixel basis, and a per-group-of-pixel basis.

3. The graphics system as recited in claim 1, wherein said density is varied according to one or more of the following: input from an eye-tracking device, input from a head-tracking device, input from a hand-tracking device, input from a mouse, a cursor position, a visible object position, and a main character position.

4. The graphics system as recited in claim1, wherein said density is varied according to input from a gaze tracking device.

5. The graphics system as recited in claim 1, wherein said density is selected on a per frame region basis from a predetermined group of densities.

6. The graphics system as recited in claim 1, wherein said density is substantially continuously variable across one or more frame region boundaries.

7. The graphics system as recited in claim 1, wherein said sample-to-pixel calculation unit is configured to filter samples to form output pixels on a real time basis.

8. The graphics system as recited in claim 1, wherein said sample-to-pixel calculation unit is configured to filter samples to form output pixels on an on-the-fly basis.

9. The graphics system as recited in claim 1, wherein at least a part of each sample is double-buffered in said sample buffer.

10. The graphics system as recited in claim 1, further comprising a sample position memory coupled to said graphics processor, wherein said sample position memory is configured to store information usable to determine sample positions.

11. The graphics system as recited in claim 1, further comprising a sample position memory coupled to said graphics processor, wherein said sample position memory is configured to store one or more sample position schemes, and wherein said graphics processor is configured to read sample positions from said sample position memory.

12. The graphics system as recited in claim 1, further comprising a sample position memory coupled to said graphics processor, wherein said sample position memory is configured to store one or more sample position schemes for one or more sample densities, wherein said graphics processor is configured to read sample positions from said sample position memory according to a selected sample density and a selected sample position scheme.

13. The graphics system as recited in claim 1, wherein said samples are stored in said sample buffer according to bins, wherein each bin has a position, wherein said

sample position memory is configured to store said sample positions as offsets relative to said bin positions.

14. The graphics system as recited in claim 13, wherein said bin positions corresponds to pixel positions on a display device.

15. The graphics system as recited in claim 1, wherein said graphics processor is configured to store said samples into said sample buffer according to bins, and wherein said bins correspond to screen space areas.

16. The graphics system as recited in claim 1, wherein said graphics processor is configured to store said samples into said sample buffer according to bins, and wherein said bins correspond to screen space areas.

17. The graphics system as recited in claim 1,

wherein in generating the plurality of samples with a variable density, the graphics processor generates a first portion of the plurality of samples in a super-sampled manner and having a first density, and the graphics processor generates a second portion of the plurality of samples in a super-sampled manner and having a second different density.

18. The graphics system as recited in claim 1,

wherein the graphics processor generates at least a portion of the plurality of samples in a super-sampled manner such that each of at least a subset of the plurality of pixels has a corresponding plurality of samples.

19. A graphics system comprising:

a graphics processor configured to generate a plurality of samples corresponding to a plurality of pixel locations on a display, wherein the graphics processor generates

two of more samples for each of at least a subset of the pixel locations, wherein the graphics processor generates different numbers of samples for at least a subset of the pixel locations;

a sample buffer coupled to said graphics processor for storing the plurality of samples, wherein at least a part of each sample is double-buffered in the sample buffer; and

a sample-to-pixel calculation unit coupled to said sample buffer, wherein the sample-to-pixel calculation unit is configured to select and filter the stored samples to form output pixels.

20. The graphics system of claim 19,

wherein the plurality of samples comprised in the sample buffer correspond to an entire frame of a display; and

wherein the output pixels correspond to the entire frame of the display.

21. The graphics system of claim 19, wherein said density is varied according to input received from a gaze tracking device.

22. A graphics system comprising:

a graphics processor configured to generate a plurality of samples corresponding to a plurality of pixel locations on a display, wherein the graphics processor generates two of more samples for each of at least a subset of the pixel locations, wherein the graphics processor generates different numbers of samples for at least a subset of the pixel locations;

a sample buffer coupled to said graphics processor for storing the plurality of samples, wherein the plurality of samples comprised in the sample buffer correspond to an entire frame of a display;

a sample-to-pixel calculation unit coupled to said sample buffer, wherein the

sample-to-pixel calculation unit is configured to select and filter the stored samples to form output pixels; and

wherein the output pixels correspond to the entire frame of the display.

23. The graphics system of 22,

wherein at least a part of each sample is double-buffered in the sample buffer; and

24. A method for producing output pixels for graphics system, comprising:

generating a plurality of samples in a super-sampled manner, wherein at least a portion of the plurality of samples have a variable density;

storing the plurality of samples, wherein the stored plurality of samples correspond to an entire frame of a display; and

selecting and filtering the stored samples to form output pixels, wherein the output pixels correspond to the entire frame of the display.

25. The method of claim 24,

wherein said storing comprises storing the plurality of samples in a double buffered fashion.